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FIGURE 1A

GAGCCGGTGGCGCAGGTGTCGGGGTCTCGAGCGCCAGCCTGGGAGCATGATTGTGGACAAGCTGCTGGACGAC
AGCCGCGGCGGAGAGGGGCTGCGGGACGCGGCGGGCGGCTGCGGCCTCATGACCAGCCCGCTCAACCTGAGCTAC
TTCTACGGCGCGTCGCGCGCCGCGCGCCCGGGCGCCTGCGACGCCAGCTGCTCGGTCTTGGGCCCCCTCGGCG
CCCGGCTCGCCCGGCTCCGACTCCTCCGACTTCTCCTCTGCTCGTCTGCTCGGTGTCTCTCTGCGGCGCCGTGGAGTCC
CGGTCGAGAGGCGGCGCCGCGCGGAGCGCCAGCCAGTTGAGCCCCATATGGGGGTGGCAGGCAGCAGAGAGGC
CCCTTTCAAGGTGTTCTGGGTAAAGAACTCAGTGAAGGAACCTCTGTTGCACATCCGAAGTCATAAACAGAAGGCT
TCTGGCCAAGCTGTGGATGATTTTAAGACACAAGGTGTGAACATAGAACAGTTTCAAGAAATGAAGAACACAGTA
TCATACAGTGGGAAAAGGAAAGGGCCCGATTTCGTTGTCTGATGGACCTGCTTGCAAAGGCCAGCTCTGTTGCAT
TCCCAATTTTTGACACCACCTCAAACACCAACGCCCGGGGAGAGCATGGAAGATGTTTCATCTCAATGAACCCAAA
CAGGAGAGCAGTGCTGATCTGCTTCAGAACATTATCAACATTAAGAATGAATGCAGCCCCGTTTCCCTGAACACA
GTTCAAGTTAGCTGGCTGAACCCCGTGGTGGTCCCTCAGAGCTCCCCCGCAGAGCAGTGTCAGGACTTCCATGGA
GGGCAGGTCTTTTTCTCCACCTCAGAAATGCCAACCATTCCAAGTCAGGGGCTCCCAACAAATGATAGACCAGGCT
TCCCTGTACCAGTATTCTCCACAGAACCCAGCATGTAGAGCAGCAGCCACACTACACCCACAAACCAACTCTGGAA
TACAGTCTTTTTCCCATACCTCCCCAGTCCCCCGCTTATGAACCAAACCTCTTTGATGGTCCAGAATCACAGTTT
TGCCCAAACCAAAGCTTAGTTTTCCCTTCTTGGTGATCAAAGGGAATCTGAGAATATTGCTAATCCCATGCAGACT
TCCTCCAGTGTTTCAGCAGCAAAATGATGCTCACTTGCACAGCTTCAGCATGATGCCCAGCAGCGCTGTGAGGCC
ATGGTGGGGCACGAGATGGCCTCTGACTCTTCAAAACACTTCACTGCCATTCTCAAACATGGGAAATCCAATGAAC
ACCACACAGTTAGGGAAATCACTTTTTTCAGTGGCAGGTGGAGCAGGAAGAAAGCAAATTTGGCAAATATTTCCCAA
GACCAGTTTCTTTCAAAGGATGCAGATGGTGACACGTTTCTTCATATTGCTGTTGCCCAAGGGAGAAGGGCACTT
TCCTATGTTCTTGCAAGAAAGATGAATGCACCTTCAATGCTGGATATTAAAGAGCACAAATGGACAGAGTGCCCTT
CAGGTGGCAGTGGCTGCCAATCAGCATCTCATTGTGCAGGATCTGGTGAACATCGGGGCACAGGTGAACACCACA
GACTGCTGGGGAAGAACACCTCTGCATGTGTGTGCTGAGAAGGGCCACTCCAGGTGCTTCAGGCGATTTCAGAAG
GGAGCAGTGGGAAGTAATCAGTTTGTGGATCTTGAGGCAACTAACTATGATGGCCTGACTCCCTTCACTGTGCA
GTCATAGCCCAATGCTGTGGTCCATGAACCTCAGAGAAATCAACAGCCTCATTCACCTGAAGTTTCAGGAGCTT
TTACTGAAGAATAAGAGTCTGGTTGATACCATTAAAGTGCCTAATTCAAATGGGAGCAGCGGTGGAAGCGAAGGAT
CGCAAAGTGGCCGCACAGCCCTGCATTGCGCAGCTGAAGAAGCAAATCTGGAACCTATTGCGCTCTTTTTGGAG
CTGCCAGTTGCCTGTCTTTTGTGAATGCAAAGGCTTACAATGGCAACACTGCCCTCCATGTTGCTGCCAGCTTG
CAGTATCGGTTGACACAATTAGATGCTGTCCGCTGTTGATGAGGAAGGGAGCAGACCCAAGTACTCGGAACCTG
GAGAACGAACAGCCAGTGCATTGTTTCCGATGGCCCTGTGGGAGAACAGATCCGACGTATCTGAAGGGAAAG
TCCATTTCAGCAGAGAGCTCCACCGTATTAGCTCCATTAGCTTGGAGCCTGGCTAGCAACACTCACTGTCAAGTTAG
GCAGTCTGATGTATCTGTACATAGACCATTGCTTATATTGGCAAATGTAAGTTGTTTCTATGAAACAAACAT
ATTTAGTTCACTATTATATAGTGGGTTATATTAAGAAAGAAAGAAAGAAATATCTAATTTCTCTTGGCAGATTTG
CATATTTTCATACCCAGGTATCTGGGATCTAGACATCTGAATTTGATCTCAATGGTAACATTGCCTTCAATTAACA
GTAGCTTTTGAGTAGGAAAGGACTTTGATTTGTGGCACAAAACATTATTAATATAGCTATTGACAGTTTCAAAGC
AGGTAAATTGTAAATGTTTCTTTAAGAAAAAGCATGTGAAAGGAAAAAGGTAAATACAGCATTGAGGCTTCATT
GGCCTTAGTCCCTGGGAGTTACTGGCGTTGGACAGGCTTCAGTCATTGGACTAGATGAAAGGTGTCCATGGTTAG
AATTTGATCTTTGCAAACCTGTATATAATTGTTATTTTTGTCTTAAAAATATTGTACATACTTGGTTGTTAACAT
GGTCATATTTGAAATGTATAAGTCCATAAAATAGAAAAGAACAAAGTGAATTGTTGCTATTTAAAAAAATTTTACA
ATTCTTACTAAGGAGTTTTTATTGTGTAATCACTAAGTCTTTGTAGATAAAGCAGATGGGGAGTTACGGAGTTGT
TCCTTTACTGGCTGAAAGATATATTCGAATTGTAAAGATGCTTTTTCTCATGCATTGAAATTATACATTATTGT
AGGGAATTGCATGCTTTTTTTTTTCTCCCGAGACAGGGCTTGCTCTGGCGCCAGGCTGGAGTACAGTGG
CATGATCTTGGCTCACTTCAGCCTTGACTTGGGCTCAAGTGATCTCTACCTGAGCCTTCTGAGTAACTGGGAC
TACAGGTGTGCACTCCTCGCTGGCTAATTTTTTAATTTTGTACAGGCAGGATCTTGCCACCTTGCCAGGCTG
GTCTTGAACCTCTGAGCTCATGCCATCTGCCTGCCCTAGTCTCCCAAATGCTGGGATTACAGGAGTGAGCCACC
ATGCCCGGCTGGCAGTTGCATGGAAGAGAACCTCTTATGGCTTACCCTCTAGAATTTCTAATTTATGTGTTT
TGTTGAAATTTTTGTTTTTTTACCTTTATTGAAACAACAAAAAGTCAGTATTGAAACATATCTTCTGTTTTCTG
TTGTCAAATGATGATAATGTGCCATGATGTTTTATATATATCATTCAGAAAAAGTTTTATTTTTTAATAACATTC
TATTAACATTATTTTGCTTGCCGCTGGCATGCCTGAGGAATGTATTTGGCTTTGATTACACACTAAGTTTTTGTA

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FIGURE 1B

ATAAATTTGACTCATTAAAAACCTTTTTTTTTTAAAAAAAAAAAAAGAAAATCTCATTAGTGAACCTTATCTTTG
CAGCTGAGTACTTAAATTCTTTTTAAAAAGATACCCTTTGGATTGATCACATTGTTTGACCCAGTATGTCTTGTA
GACACGTTAGTTATAATCACCTTGTATCTCTAAATATGGTGTGATATGAACCAGTCCATTACATTGGAAAACT
GATGGTTTTAAATAAACTAATTCATAATAAAAAAAAAAAAAAA

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FIGURE 2

MIVDKLLDDSRGGEGLRDAAGGCGLMTSPLNLSYFYGASPPAAAPGACDASCSVLGPSAPGSPGSDSSDFSSASS
VSSCGAVESRSRGGARAERQPVPHMGVGRQQRGPFQGV RVKNSVKELLHIRSHKQKASGQAVDDFKTQGVNIE
QFRELKNTVSYSGKRKGPDSLSDGPACKRPALLHSQFLTPPQTPTPGESMEDVHLNEPKQESSADLLQNIINIKN
ECSPVSLNTVQVSWLNPVVVPQSSPAEQCQDFHGGQVFSPQKQPFQVRGSQQMIDQASLYQYSPQNQHVEQQP
HYTHKPTLEYSPPFIPFQSPAYEPNLFDPESQFCPNQSLVSLLDQRESENIANPMQTSSSVQQQND AHLHSFS
MMPSSACEAMVGHEMASDSSNTSLPFSNMGNPMNTTQLGKSLFQWQVEQEE SKLANISQDQFLSKDADGDTFLHI
AVAQGRRALSYVLARKMNALHMLDIKEHNGQSAFQVAVANQHLIVQDLVNIGAQVNTTDCWGRTP LHVCAEKGH
SQVLQAIQKGAVGSNQFVDLEATNYDGLTPLHCAVIAHNAVVELQRNQPHSPEVQELLLKNKSLVDTIKCLIQ
MGAAVEAKDRKSGRTALHLAAEEANLELIRLFLELP SCLSFVNAKAYNGNTALHVAASLQYRLTQLDAVRLLMRK
GADPSTRNLENEQPVHLVDPGVPVGEQIRRILKGKSIQQRAPPY

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FIGURE 3

ACTCATTATATACCAGGAAACAGACAAGAGAACAAGAGGCTGCCGAAGACAAAACCTTCTCTGCAAGCACCTGTGCA
CAGCAATGTGCGTGGGCATCTGTGAGAAGAAGAGAATCTGTGAAGTTTGAGCAAGCGGCCTTCCCAAGATGTACC
GAATATCTCAACTGATGTCAACACCAGTAGCAAGTTCTTCCAGGTTGGAAAGAGAATATGCTGGAGAGCTGTCTC
CCACGTGCATTTTCCCAAGTTTACCTGTGATTCCCTGGATGGTTACCATTCTTTTGAATGCGGCTCCATAGATC
CCCTGACAGGCTCCCACTATACCTGTGCGCGAAGTCCCAGACTCCTCACCAATGGCTACTATATTTGGACTGAAG
ACAGCTTCCTGTGCGACAAAGATGGCAACATAACTCTGAACCCATCCCAGACCAGCGTTATGTATAAGGAGAACT
TAGTTAGTACCTCCAAATCTTGGCTGCATGGAAGTATCTTTGGTGACATCAACTCTTCTCCAAGTGAAGACAAC
GGTTGAAGGGGACCAGGAGGTTGGACACAGACCATTGCAATGGAAATGCAGATGATTAGACTGTTCTTCTCTGA
CTGATGACTGGGAGTCAGGGAAGATGAATGCAGAGTCTGTGATCACCTCCTCTTCCAGCCACATCATATCTCAGC
CTCCTGGAGGAACTCCCATAGCTTGTCTCTTCAGTCCCAGTTGACAGCTTCTGAACGTTTCCAAGAGAATAGTT
CGGATCATTACAGAAACCAGGTTGTTGCAAGAGGCTTCTTTTCAGGCAATCCTGCTTGCTGTGTGCTTAATCACTT
CTGTCATGTGCAAGATGGTTTATGGGAGAAATATTAGCCAGTGTCTTCACATGCTCATTGATGATAACTGTAGCTT
ATGTGAAATCATTGTTTCTCAGCCTTGCCAGCTATTTCAAACCACTGCCTGTGCTCGGTTTGTCAAATTTGAC
AACCATTTAGGAATGCCTTCGATGAATGTCCTCCATCTGAATATCTGGAAATTGTCCACTTGCAGTCTACTTGG
AATCAAGTGTTTTATTGGAAGGGAGTAAGCGAGTAATGGAGAAAAAGCCATTTTAGTTTGAATATGTGATTTTAA
AATGATCTCAGTTTTTCCATCAAAATTATAATATGCTCATGAAAAATAATATTAATTTGCCTTCCCTTTGCAAACA
CCGGCAGTTGAAAGGAAAAGGACGGGGAATGTGATGGAAAAGAGACCGCCTGGAATAAATGTCCCCCTATGATTC
TTTAAGGCAGTGGTTCTCGAGCTTGAATTTTCATTAGGAAATCTGTGAGGAGCTTGTAACCAGATTTCTGGGTC
TGCCACATGCACCTATCTCTTGCTGAATTGCTTTAATAGAATAATGAGAGCAAGTTTGTCTAACTAATAACCAACC
TGACAACTTGAATAACAATAAATGCAATTTGTACATAAAATATAATGCTGCAAAAGTTTGTCAATTCACCTCAGTG
GAGTGACTTGATATTAGGTGGTAACCGTAGATGATGGTTAATATGAAAATGGACAGGAAAGAAGCATTTTCTGAA
AGTTATATTCTTTTGAACACGTTCTAAACCAAGTTTTTAATCTTCTTGGGGCTCGTAATTACCTTTCACTTTAA
TGTCACTTAAAGATATAACACAGAAAAATGCCTTGAGGGCAAAATATAGGCAAAACACCAATGCGCTTTCAAATG
CATGAAAATGGTGCAGTTGTACCTTGAGCCTTGACTCAAGGGCTGTAGATGTTCCCTTTCCACCCCCACACTT
GGTGCCTGTTACAAAGCAAATATGGCCTGTAATTCAAATTTGTTCTATGTGATACTCTCTGAGTAAAAACTCAT
ACATGCAGAAAAATGTCTTTGCTCGAAATGATAATGCCAAAATATAACTTTATATATAATTTGCATTTAGTACAT
TTTTGGTTAAAAATAAACTAATAAATAAGTGAAGTCATCAGC

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FIGURE 4

MYRISQLMSTPVASSSRLEREYAGELSPTCIFPSFTCDSLDGYHSFECGSIDPLTGSHYTCRRSPRLLTNGYYIW
TEDSFLCDKDGNIITLNPSTSVMYKENLVSTSKSWLHGSIFGDINSSPSEDNWLKGTRRLDTDHCNGNADDLDCS
SLTDDWESGKMNAESVITSSSSHIISQPPGGNSHSLSLQSQLTASERFQENSSDHSETRLLQEVFFQAILLAVCL
ITSACARWFMGEILASVFTCSLMITVAYVKSFLSLASYFKTTACARFVKI

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FIGURE 5

GGCGGGGGGGCCGAGCCGCTCAGTCTCCCTGCTCTCCGTGGTCCCGGCTCGCGTGTAGCGGCGGGCGGGCGGTCT
CCGGTGAGGAGGCGCGCGGGGCCATGACGTACGCTCCACAAAGGTCGGAGAGATCTTCTCGGCGGGCGGGCGCCG
CCTTCACGAAGCTCGGGGAGCTGACGATGCAGCTGCATCCCGTGGCCGACTCTTCTCCTGCGGGCGGAAGTGA
CGGAGACGGAAATAGAGATGCTGAGGGCTGCTGTGAAGCGATTGGGGACGATCTTAATCACATCAGCTGTGTCA
TCAAGGAACGGACAGTGGCCAGATAAAGGCCACTGTGAAACGCAAGGTATATGAAGATTCTGGCATCCCCCTTC
CAGCTGAGTCACCCAAGAAAGGGCCCAAGAAGGTGGCATCTGGTGTCTTGTCACCTCCTCCAGCTGCCCCCTCCTC
CCAGCAGCTCCAGTGTCCCTGAGGCCGGGGGTCCCCCATAAAGAAACAGAAGGCTGATGTGACACTCAGTGCTC
TGAACGACTCCGATGCCAACAGTGACGTGGTGGATATTGAAGGGCTAGGAGAACTCCTCCAGCTAAGAACTCA
ACTTCGACCAGGACAGCCTGACCCTGGATTCTGGCCTTCTCATGACCTCTGCTGATCCTCCTCTCCTCTCCTGCT
GAGCCTTCCACCTCTGACCTCTCACTGTTTCATGCCGGACCTGTGGATCTCCTGGGACTCCGAGCAAGGCCTGCAC
GAGAGAGGGCTGAAAGGCTGCTGGGGCTGCCACCTCGCTATTCCCGCATAAGCATCTGCCCCCAACCCCTTTGAC
CTTCATCTGATGGACATTTTTATACAGAAAACAATAAAGATTTCCCTCTCAGCTT

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FIGURE 6

AGARAAQSPCSPWSRLACSGGGGVSCEEARGAMTSASTKVGEIFSAAGAAFTKLGELTMQLHPVADSSPAGAKWT
ETEIEMLRAAVKRFGDDLNHISCVIKERTVAQIKATVKRKVYEDSGIPLPAESPCKGPKKVASGVLSPPPAAPP
SSSSVFEAGGPPIKKQKADVTLNLSALNDSANDVVDIEGLGETPPAKKLNFDQSLTLDGGLMTSADPPLLSC

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FIGURE 7

AAAAAAAAACAAAAACAAAACAAAAAAACCTTCCAAAAGAAGTTTGAGATAATTTTATGTTTAGAAAAATTAG
AAATTGGATTGAGTAAATTTACATATTTTACACAAGAGGACTAACATCTTTATAATATTTAACCTTTCAGTAAA
TTTATGTTTTATGTTTCTCAGCCTATCTTTTCTAGTATAGGTGATTTTTTTTAGTGTGGTTACTATTGTAAATGAG
ATCCTACTACTTTAAAAAATGAAAATTAAATCTATCGCTTTTATGACTTTAAAACATTAGACTTATGTAAAGTGTA
AACATTATTTAAAAACATAATGTAGAAAATTAAAGTCCCCCATAATTAAAATCCCTTTCCCCCAGAAAAAGTCAA
CAGCATATTCATCAGTTTTTTCCTAAAGTATGTTT TAGCACTTTGACCATATGAGACAACCCTTCTGCTGTTAGC
ATTTTTCTCTTTGCAATAGATCTTCTATGTCAGTACACATCAATCTACCTCATTCTTACCTCTGCATAAGAGAG
TAGTGTGTAGTTGTATAATAGTTTAACTTGGCGATTGGTTATTGATTTTGTAAGTAGCCAGTTACTGAATTATTC
TAAAGGTTTTGCTGTTGTTAATTTCTTTTCGCTTTTTCAGTTGGGTAATAGTTCTGGGTAGGTTGATAATTTTAT
TCCCATATTTGTAATCTTATTTCACTTTCTCAACTCATCACATTGACTGGTACTTTTAGAACAATGTTAAAAAAC
ATTTACATAATTGTGCTGATATTGTACATTATTTGATATATATATATTTTTTTTACTTAGAAGAGTGTCTCCA
AAACTATAAATTTGACTCTTAGTGTAATAATCTTAATATTTGAATTATACATTCAGGTTATGCCCTCTATTTT
TAGTTTGATGAAAATATTATTAGTAATGGATGTTGGGGTTTTATTAAATGGCTTTTTTCCACATCTGTCAAGATG
ATCAACTGGCTTTTCTCTATTATGACTTTAGATGAATCGTTTTAATAGATTTGCTAATGTTAAGACATCTCTGCA
TTTCTACAAGAATCTGATGTAGTCATAGTATACTATTCTTTTAAATATACATCTCCTTTCAATGTTAACAGTGGTT
ATTTATGATTGGTTGGTCCATAGTAGATTTTATT TTGTGTTTCTTATCTGTACTTTCTGATTTTTCTACAAAGA
TTGTGTATTACTTGTATAATAAAAATAAGAGCTTTAAATTGTGAAATTCTTCTGGATTGGTTTTCTCATTTTAT
TATGGAATTTTTCATA

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FIGURE 8

GGCACGAGGCAAAGAGCTGCCTAAAGAACTGGTAGCTGGAGCAAAGTGCAGAGATCAAGATGACCCTAGTCCAC
GGAACCAGCAGCCCAGGTCAGCCACATTCAGGAGCACCACCGAGGCACGGCAGGGAGAGCAAAGTTGCTGGCCCC
AATCATTCTCTCTTTTCAGGGCAGGAGAGGCAGAAGCTCACTCTTTAGACATGTTCTTGATGGTCTTGTGCTCTT
TCATGGCCTTCTCCCAATCGCTGCCATTGAATTCTCAGTGACCATACTCCGCACAGTGCCCTCATCCAGGCAGT
GGGGGGCAATTCCGAAGCCTCCGGGGTTTGATCGTGGAGTATAGAAGCTCTGAACGCCACATCTCTTACAGAAGG
TATGCTGGGCTTTGTGAGTATTGAACGTGTAAGTCGTTATGTGCTCAGCTCCCTTCAGGAGCTTGAAGCGAGAAG
CCTGGAACAATGAAGTGTCTATTCTGCTTCTTCTTGCNAATGCTGCAACTACAGAAAGACAGAGCAAATTCCAG
ATTG

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FIGURE 9

[illegible]

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FIGURE 10

MPVAVGPGYQSQPSCFDRVKMGFVMGCAVGMAAGALFGTFSCLRIGMRGRELMGGIGKTMQSGGTFGTFMAIGM
GIRC

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FIGURE 11

AGACTCCCTGTCTTTGCGGTTTGGGAGATCATGAGAAACCACAGAATTGCTAGTAGTTTATGTGGAGATCAGGTC
TTCTCCAAGAAAAAAGAAAAAACAACATGGCTGCAAAGGAGAACTGGAGGCAGTGTTAAATGTG
GCCCTGAGGGTGCCAAGCATCATGCTGTTGGATGTCCTGTACAGATGGGATGTCAGCTCCTTTTTCCAGCAGATC
CAAAGAAGTAGCCTTAGTAATAACCTCTTTTCCAGTATAAGTATTTGGCTCTTAATATGCATTATGTAGGTTAT
ATCTTAAGTGTGGTGCTGCTAACATTGCCCAGGCAGCATCTGGTTCAGCTTTATCTATATTTTTTACTGCTCTG
CTCCTCTATGCTGGACATCAAATTTCCAGGGACTATGTTCCGGAGTGAACCTGGAGTTTGCCTATGAGGGACCAATG
TATTTAGAACCTCTCTCTATGAATCGGTTTACCACAGCCTTAATAGGTCAGTTGGTGGTGTGTACTTTATGCTCC
TGTGTCATGAAAACAAAGCAGATTTGGCTGTTTTTCAGCTCACATGCTTCCTCTGCTAGCACGACTCTGCCTTGTT
CCTTTGGAGACAATTGTTATCATCAATAAATTTGCTATGATTTTTACTGGATTGGAAGTTCTCTATTTTTCTTGGG
TCTAATCTTTTGGTACCTTATAACCTTGCTAAATCTGCATACAGAGAATTGGTTCAGGTAGTGGAGGTATATGGC
CTTCTCGCCTTGGGAATGTCCCTGTGGAATCAACTGGTAGTCCCTGTTCTTTTCATGGTTTTCTGGCTCGTCTTA
TTTGCTCTTCAGATTTACTCCTATTTTCACTACTCGAGATCAGCCTGCATCACGTGAGAGGCTTCTTTTCCTTTTT
CTGACAAGTATTGCGGAATGCTGCAGCACTCCTTACTCTCTTTTGGGTTTGGTCTTCACGGTTTTCTTTTGTGGCC
TTGGGTGTTCTCACACTCTGCAAGTTTTTACTTGCAGGGTTATCGAGCTTTCATGAATGATCCTGCCATGAATCGG
GGCATGACAGAAGGAGTAACGCTGTTAATCTGGCAGTGCAGACTGGGCTGATAGAAGTGCAGGTTGTTTCATCGG
GCATTCTTGCTCAGTATTATCCTTTTTCATTGTCGTAGCTTCTATCCTACAGTCTATGTTAGAAATTGCAGATCCT
ATTGTTTTGGCACTGGGAGCATCTAGAGACAAGAGCTTGTGAAACACTTCCGTGCTGTAAGCCTTTGTTTATTT
TTATTGGTATTCCCTGCTTATATGGCTTATATGATTTGCCAGTTTTTCCACATGGATTTTTGGCTTCTTATCATT
ATTTCCAGCAGCATTCTTACCTCTCTTCAGGTTCTGGGAACACTTTTTATTTATGTCTTATTTATGTTGAGGAA
TTCAGAAAAGAGCCAGTGGAAAACATGGATGATGT CATCTACTATGTGAATGGCACTTACCGCCTGCTGGAGTTT
CTTGTGGCCCTCTGTGTGGTGGCCTATGGCGTCTCAGAGACCATCTTTGGAGAATGGACAGTGTATGGGCTCAATG
ATCATCTTCATTTCCTACTATAACGTGTGGCTTCGGGCCAGCTGGGGTGGAAAGAGCTTTCTTCTCCGCAGG
GATGCTGTGAATAAGATTAAATCGTTACCCATTGCTACGAAAGAGCAGCTTGAGAAACACAATGATATTTGTGCC
ATCTGTTATCAGGACATGAAATCTGCTGTGATCACGCCTTGCACTCATTTTTTCCATGCAGGCTGTCTTAAGAAA
TGGCTGTATGTCCAGGAGACCTGCCCTCTGTGCCACTGCCATCTGAAAACTCCTCCCAGCTTCCAGGATTAGGA
ACTGAGCCAGTTCTACAGCCTCATGCTGGAGCTGAGCAAAACGTCATGTTTCAGGAAGGTACTGAACCCCCAGGC
CAGGAGCATACTCCAGGGACCAGGATACAGGAAGGTTCCAGGGACAATAATGAGTACATTGCCAGACGACCAGAT
AACCAGGAAGGGGCTTTTGACCCCAAAGAATATCCTCACAGTGCGAAAGATGAAGCACATCCTGTTGAATCAGCC
TAGAGGAGAAGCAGCAGGAATGATGCTTTGATACTCTGGAGGAGAAGTTAACTCAAGATGGAATTCATGTTCTGA
TTTGAGGAATGAAAATGAGATGATCAGGCAGGAAAAGTACATTCCAAGGATCTAATCCAGGAAGTACTCTCAGTG
GGGACCACCTGCTTTCATCCCCTGACATTGTGGGAGAAAATTTTGCAATGTATGCTAATCAAAATGTATTTATATG
TTCTCTGCTGATGTTTTATAGAGGTTTGTGAAGAAAATTCACCTCAGCAACTTCAGAAACTGCCCCTGATACGT
GTGAGAGAGAAATAAAATCAGATTTTGTGTTGAAGGGACTGAGGAAGTGAGGATAAAGAGCATGAGGACAGCA
TGGAAAAGAAGGAGGCAGAAGTGAAGTGAACCTTTCCTCTCCATGGGACAGATCAATCTCATTATCAAGTCTGAA
TAGCAACCAGCCCTCTCCTCCACCCCGTTTCTCCTCAGTTAATTGGAGCTCAGTCAGGTGATTATTGAGTCTTGT
ACAGCACTGAAATGAAATCAAAGATGAAGAAGCATTGATTGTATTGGAAGATTGAAGCACGCTCATACTTTGTAT
GTGCTTTAGGGAAGGGGTGGGTGGGCCTTGGGCCCTTGGGGTGCATTTCATGTAATCTGAGACTCTTGAACCTTA
TGACGGAGTCTTCAATATTTTGTATATATGAAACCTTTGTTAAATATGTTGTATACTTCGCTGGCTGTGTGAAG
TAACTAAAACCTCTGATGAACACTTTGGAGTCTGCTTTAGTGAAGGAGACCAAAGTGGGAAGGGCTTTAGGGCAC
TGATAGAGGCCCTGGGTGTACTTTTCAATCCTGTGTAATGTTTAAATCTTGCAACTGAATCAAAACAGTGTTAA
TTATGGCAATATTTGCACCTTTTGGGAATGAGTACATAACTGTATGATCACACTCTGCAAATGCCACTTTTAAAGCT
GTTAATAGACTTTGCACCTTTTCTTTGACAAGGATGTGTCATATTTAAATTTTTTACATTCATCATGGCTACAGGT
AGAACTGGGGAGGGGGGAATGTAATTTTTTATGGGAATTTTGATATGAAAAGAACTAGTCATTTATTTATACAA
TAGGCTTGGCTCAAAAAGTGTTTTTCAGACCTCGGTATTCCTAATGTGGGATGTGACTTTATTTTATTTTATAGTA
GCAAATTTGGATGTAGACTGACAGACATAGCTGAAATGCTTAATAAATTTAAATTTGAAGAT

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FIGURE 12

MMRNHRIASSLCGDQVFSKKKKKKKKNNMAAKEKLEAVLNVALRVPSIMLLDVLYRWDVSSFFQQIQRSSLSNNP
LFQYKYLALNMHYVGYILSVVLLTLPRQHLVQLYLYFLTALLLYAGHQISRDIYRSELEFAYEGPMYLEPLSMNR
FTTALIGQLVVCTLCSCVMKTKQIWLFSAHMLPLLARLCLVPLETIVIINKFAMIFTGLEVLVYFLGSNLLVPYNL
AKSAYRELVQVVEVYGLLALGMSLWNQLVVPVLFMVFWLVLFALQIYSYFSTRDQPASRERLLFLFLTSIAECCS
TPYSLGLVFTVSFVALGVLTLCCKFYLGYRAFMNDPAMNRMTEGVTLILLAVQTGLIELQVHRAFLLSIILF
IVVASILQSMLEIADPIVLALGASRDKSLWKHFRAVSLCLFLLVFPAYMAYMICQFFHMDFWLLIISSSILTSL
QVLGTLFIYVLFMVVEEFRKEPVENMDDVIYYVNGTYRLLLEFLVALCVVAYGVSETIFGEWTVMGSMIIFIHSYNN
VWLRAQLGWKSFLRRDAVNKIKSLPIATKEQLEKHNDICAICYQDMKSAVITPCSHFFHAGCLKKWLYVQETCP
LCHCHLKNSSQLPGLGTEPVLQPHAGAEQNVMFQEGTEPPGQEHPTGTRIQEGSRDNNEYIARRPDNQEAFDPK
EYPHSAKDEAHPVESA

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FIGURE 13A

TGAATTCGTGAGAGACTTGAGGGAGGCGCTGCGACTGACAAGCGGCTCTGCCCCGGGACCTTCTCGCTTTCATCTA
GCGCTGCACTCAATGGAGGGGCGGGCACCAGTGCTTAATGCTGTCTTAACTAGTGTAGGAAAACGGCTCAACC
CACCCTGCGGAAATGAAGTATAAGAATCTTATGGCAAGGGCCTTATATGACAATGTCCAGAGTGTGCCGAGGA
ACTGGCCTTTTCGCAAGGGAGACATCCTGACCGTCATAGAGCAGAACACAGGGGGGACTGGAAGGATGGTGGCTGTG
CTCGTTACACGGTTCGGCAAGGCATTGTCCCAGGCAACCGGGTGAAGCTTCTGATTGGTCCCATGCAGGAGACTGC
CTCCAGTCACGAGCAGCCTGCCCTCTGGACTGATGCAGCAGACCTTTGGCCAACAGAAGCTCTATCAAGTGCCAAA
CCCACAGGCTGCTCCCCGAGACACCATCTACCAAGTGCCACCTTCTTACCAAAATCAGGGAAATTTACCAAGTCCC
CACTGGCCACGGCACCCAAGAACAAGAGGTATATCAGGTGCCACCATCAGTGCAGAGAAGCATTGGGGGAACAG
TGGGCCCCACGTGGGTAAAAAGGTGATAACCCCCGTGAGGACAGGCCATGGCTACGTATACGAGTACCCATCCAG
ATACCAAAAGGATGTCTATGATATCCCTCCTTCTCATACCACTCAAGGGGTATACGACATCCCTCCCTCATCAGC
AAAAGGCCCTGTGTTTTTCAGTTCCAGTGGGAGAGATAAAACCTCAAGGGGTGTATGACATCCCGCCTACAAAAGG
GGTATATGCCATTCCGCCCTCTGCTTGCCGGGATGAAGCAGGGCTTAGGGAAAAAGACTATGACTTCCCCCTCC
CATGAGACAAGCTGGAAGGCCGGACCTCAGACCGGAGGGGGTTTATGACATTCCCTCCAACCTGCACCAAGCCAGC
AGGGAAGGACCTTCATGTAAATACAACCTGTGACATTCAGGAGCTGCAGAACCAGGTGGCTCGAAGGCACAGAG
CCTGTCCCCGAATCACCCACCCCGCAACTCGGACAGTCAGTGGGCTCTCAGAACGACGCATATGATGTCCCCCG
AGGCGTTTCAGTTTCTTGAGCCACCAGCAGAAACAGTGAGAAAGCAAACCCCCAGGAAAGGGATGGTGTATATGA
TGTCCCTCTGCATAACCCGCCAGATGCTAAAGGCTCTCGGGACTTGGTGGATGGGATCAACCGATTGTCTTTCTC
CAGTACAGGCAGCACCCGGAGTAACATGTCCACGTCTTCCACCTCCTCCAAGGAGTCTCACTGTACGCTCCCC
AGCTCAGGACAAAAGGCTCTTCTGGATCCAGACACAGCTATTGAGAGACTTCAGCGGCTCCAGCAGGCCCTTGA
GATGGGTGTCTCCAGCCTAATGGCACTGGTCACTACCGACTGGCGGTGTTACGGATATATGGAAGACACATCAA
TGAAATACGCACAGCAGTGGACAAGGTGGAGCTGTTCCTGAAGGAGTACCTCCACTTTGTCAAGGGAGCTGTTGC
AAATGCTGCCTGCCTCCCGGAACCTATCCTCCACAACAAGATGAAGCGGGAGCTGCAACGAGTGAAGACTCCCA
CCAGATCCTGAGTCAAACAGCCATGACTTAAATGAGTGCAGCTGGTCCCTGAATATCTTGGCCATCAACAAGCC
CCAGAACAAGTGTGACGATCTGGACCGGTTTGTGATGGTGGCAAAGACGGTGCCGATGACGCCAAGCAGCTCAC
CACAACCATCAACACCAACGCAGAGGCCCTCTTCAGACCCGGCCCTGGCAGCTTGCATCTGAAGAATGGGCCGGA
GAGCATCATGAACCTCAACGGAGTACCCACACGGTGGCTCCCAGGGACAGCTGCTGCATCCTGGTGACCACAAGGC
CCAGGCCCAACAAGGCACTGCCCCCAGGCCTGAGCAAGGAGCAGGCCCTGACTGTAGCAGCAGTGATGGTTC
TGAGAGGAGCTGGATGGATGACTACGATTACGTCCACCTACAGGGTAAGGAGGAGTTTGAGAGGCAACAGAAAGA
GCTATTGGAAGAAAGAGAATATCATGAAACAGAAACAAGATGCAGCTGGAACATCATCAGCTGAGCCAGTTCCAGCT
GTTGGAACAAGAGATTACAAAGCCCGTGGAGAATGACATCTCGAAGTGAAGCCCTCTCAGAGCCTACCCACCAC
AAACAGTGGCGTGAGTGTCTCAGGATCGGCAGTTGCTGTGCTTCTACTATGACCAATGTGAGACCCATTTTCATTTT
CCTTCTCAACGCCATTGACGCACTCTTCAGTTGTGTGCTCAGCTCAGCCAGCCCCCGCAATCTTCGTGGCACACAG
CAAGTTTGTATCCTCAGTGCACACAACTGGTGTTCATTGGAGACACGCTGACACGGCAGGTGACTGCCAGGA
CATTGCAACAAAGTCATGAACCTCAGCAACCAGCTCTGCGAGCAGCTCAAGACTATAGTCATGGCAACCAAGAT
GGCCGCCCTCCATTACCCACAGCACACGGCCCTGCAGGAAATGGTGCACCAAGTGACAGACCTTTCTAGAAATGC
CCAGCTGTTCAAGCGCTCTTTGCTGGAGATGGCAACGTTCTGAGAAGAAAAAAGAGGAAGGGGACTGCGTTAA
CGGTTACTAAGGAAAACCTGGAATACTGTCTGGTTTTTGTAAATGTTATCTATTTTTGTAGATAATTTTATATAA
AAATGAAATATTTTAAATTTTATGGGTGAGACAACCTTTCAGAAATTCAGGGAGCTGGAGAGGGAATCTTTTTT
TCCCCCTGAGTGTCTTATGTATACAGAAATCTGAGACATAAACTGTACAGAAAACCTGTCCACGTCCTT
TTGTATGCCCATGTATTATGTTTTTGTGTTGTAGATGTTTGTCTGATGCATTTTATTAAAAAAAACCATGAAT
TACGAAGCACCTTAGTAAGCACCTTCTAATGCTGCATTTTTTTTGTGTTGTTGTTAAAAACATCCAGCTGGTTATAA
TATTGTTCTCCACGTCTTGTGATGATTCTGAGCCTGGCACTGGGAATCTGGGAAGCATAGTTTATTGTCAAGTG
TTCACCTTCAAATCATGAGGCATAGCATGACTTATTCTTGTGTTTGAAGAACTCTTTTCAAACCTGACCATCTTAA
ACACATGATGGCCAAGTGCCACAAAGCCCTCTTGCAGGAGACATTTACGAATATATATGTGGATCCAAGTCTCGAT
AGTTAGGCGTTGGAGGGAAGAGAGACCAGAGAGTTTAGAGGCCAGGACCACAGTTAGGATTGGGTTGTTTCAATA
CTGAGAGACAGCTACAATAAAAGGAGAGCAATTGCCCTCCCTGGGGCTGTTCAATCTTCTGCATTTGTGAGTGGTT
CAGTCATGAGGTTTTTCCAAAAGATGTTTTTAGAGTTGTAAAAACCATATTTGCAGCAAAAGATTTACAAAGGCGTA
TCAGACTATGATTGTTTACCAAAAATAGGGGAATGGTTTGTATCCGCCAGTTGCAAGTAGAGGCCTTTCTGACTCTT

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FIGURE 13B

AATATTCACTTTGGTGCTACTACCCCCATTACCTGAGGAACTGGCCAGGTCCTTGATCATGGAAGTATAGAGCTA
CCAGACATATCCTGCTCTCTAAGGGAATTTATTGCTATCTTGCACCTTCTTTAAAGTCAAAAAACATATGCAGA
CCTGACACTCAAGAGTGGCTAGCTACACAGAGTCCATCTAATTTTGGCAACTTCCCCCCCCGAATTC

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FIGURE 14

MKYKNLMARALYDNVPECAEELAFRKGDILTVEQNTGGLEGWWLCSLHGRQGIVPGNRVKLLIGPMQETASSHE
QPASGLMQQTFGQQKLYQVNPQAAPRDTIYQVPPSYQNQGIYQVPTGHGTQEQQEVYQVPPSVQRSIGGTSGPHV
GKKVITPVRTGHGYVYEYPSRYQKDVIDIPPSHTTQGVYDIPPSSAKGPVFSVPVGEIKPQGVYDIPPTKGVYAI
PPSACRDEAGLREKDYDFPPPMRQAGRPDLRPEGVYDIPPTCTKPAGKDLHVKNCDIPGAAEPVARRHQSLSPN
HPPPQLGQSVGSQNDAYDVPRGVQFLEPPAETSEKANPQERDGVYDVPLHNPPDAKGSRDLDGINRLSFSSTGS
TRSNMSTSSTSSKESLSASPAQDKRLFLDPDTAIERLQRLQQALEMGVSSLMALVTTDWRCYGYMERHINEIRT
AVDKVELFLKEYLHFVKGAVANAACLPILHNMKRELQRVEDSHQILSQTSHDLNECSWSLNILAINKPQNK
DDLDRFVMVAKTVPDDAKQLTTTINTNAEALFRPGPSLHLKNGPESIMNSTEYPHGGSQGQLLHPGDHKAQAHN
KALPPGLSKEQAPDCSSSDGSERSWMDYDYVHLQKKEFERQQKELLEKENIMKQNMQLHHQLSQFQLEQE
ITKPVENDISKWKPSQSLPTTNSGVSAQDRQLLCFYDQCETHFISLLNAIDALFSCVSSAQPPRIFVAHSEFVI
LSAHKLVFIGDTLTRQVTAQDIRNKVMNSSNQLCEQLKTIVMATKMAALHYPSTTALQEMVHQVTDLSRNAQLFK
RSLEMATF

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FIGURE 15

AGCGAAGTGTGGTGGCTTCCAAGGAATACAAACATAAAGGCCCTTCGACCGTTGCAAATAGACTAAAGTGAAAAACA
AATCTGAATGAAGATGAAGTTATTTTCAGACCATTTGCAGGCAGCTCAGGAGTTCAAAGTTTTCTGTGGAATCAGC
TGCCCTTGTGGCTTTCTCTACTTCTCTTACTCATGTGGCCGGAAGAAAAAGTGAACCCATATGAAGAAGTGGA
CCAAGAAAAATACTCTAATTTAGTTTCACTGTCTGTGTCATCCAGAGGCGTCGCCAGACCCCGGGATCGGTGGA
GGAAGATGCTTTGCTCTGTGGACCCGTGAGCAAGCATAAGCTGCCAAACCAAGGTGAGGACAGACGAGTGCCACA
AAACTGGTTTTCTTATCTTCAATCCAGAGAGAAGTGATAAACCAATGCAAGTGATCCTTCAGTTCCTTTGAAAAAT
CCCCTTGCAAAGGAATGTGATACCAAGTGTGACCCGAGTCCCTTCAGCAGACCATGACAAAACAACAGGTTTTCTT
GTTGGAGAGGTGGAACAGCGGATGATTCTGGAACGGGAGAAGATGGCTTTAAAGAATACACTTCAAACGTCTT
TTTACAAGGGAAACGGTTCCACGAAGCCTTGGAAGCATACTTTCACCCAGGAAACCTTAAAGAGAGAGATGA
AAATCTCCTCAAGTCTGGTTACATTGAAAGTGTCCAGCATATTCTGAAAGATGTCAGTGGAGTGCGAGCTCTTGA
AAGTGCTGTTCAACATGAAACCTTAAACTATATAGGTCTGCTGGACTGTGTGGCTGAGTATCAGGGCAAGCTCTG
TGTGATTGATTGGAAGACATCAGAGAAACCAAGCCTTTTATTCAAAGTACATTTGACAACCCACTGCAAGTTGT
GGCATAACATGGGTGCCATGAACCATGATACCAACTACAGCTTTCAGGTTCAATGTGGCTTAATTGTGGTGGCCTA
CAAAGATGGATCACCTGCCCACCCACATTTTCATGGATGCAGAGCTCTGTTCCAGTACTGGACCAAGTGGCTTCT
TCGACTAGAAGAATATACGGAAAAAGAAAAAGAACCAAGATATTTCAGAAACCAGAAATATTTCAGAAATAGGGGAGCAAG
TTGCTATTTGGGAACATTCAGCACCTTCTCACAGTTTGGGAACATATATTGCTGTTTACTCCAGTGTAAAAATGA
GGTGCCACTGGATCTGAGTGCTACACGAACACAAGTAGAAGTATTAATTTGTTGAAATGTGTTGTTTACCAAAAAG
ACTGAAAAGCCCCAAAGTCTAGATATAAAGACCTAGACTTCGGCACGCGAAATCCCAGCTATGCTACCTCTTATT
TACCTGAAAGGAGGACACGCAGGATGGGCAGTCATGCTGGTGACTCTTGTACTCCCTTGAGGGACATTGGGGGGG
GGGGGGCGTGGTCCCAGGCAGGATGCCCAGTCTTTGAGCTGAGATTGGAAGGCAGTGAGGCTGAGGGTGCCAAGA
TTTCCCCAGGGTTACCCAGAGGGGAAGGGGGCTACATGCCCCAGCTGTGTGCAGGGAGGACACATCAGCCCACT
ACCGCTGCCAACCAATGCCTAAAACCTTGTTTCATACATTGGGGTTTTCTATATATTTTCAGCTGGGAAAAGCTT
ACATTTAACCTTTTGAAAAATAAATACGTGATTAGCCTCAACTAAACATTGCTGACTATAAAGACAGTATATTC
ACCATGTCGCTGGCAATATGTCATTGCGTAACACCAATAACCCCCAGAAGTAGCCAGAGGCCAGTTTGAACAT
CACAATTCTAAGTGTTTTAGTAACATTTCTGGCGTGAGTCAACAGATCATGTAGATAGAGTCAATTATTGTTTG
TGGAGTTTTTCAGCTATAGGGGAGGGGAACATATTAATCCATTTGTTTCTATTCAATAGGTAATAAAAATTAGT
TGTCCCTGGGTTTTGGGAAACTTAAATGCCCATTACAGCCCTGGGGAAGGGTTTTCTGTCTTATGGAGTGAGTCTT
AGCATTTAAGTTATACAGTTGCTGCCTTAAATAGTAGCCTGCTACAATGACTTCTTTGGGTAGCCATTTTCATA
AGAAATAAAATACAAGATATGAGTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 16

MKMKLFQTICQLRSSKFSVESAAALVAFSTSSYSCGRKKKVNPYEEVDQEKYSNLVQSVLSSRGVAQTPGSVEED
ALLCGPVSKHKLPNQGEDRRVPQNWFPINFNPERSDKPNASDPVPLKIPLQNVIPSVTRVLQQTMTKQQVFLE
RWKQRMILELGEDGFKEYTSNVFLQGKRFHEALESILSPQETLKERDENLLKSGYIESVQHILKDVSGVRALESA
VQHETLNYIGLLDCVAEYQGKLCVIDWKTSEKPKPFIQSTFDNPLQVVAYMGAMNHDINYSFQVQCGLIVVAYKD
GSPAHPHFMDAELCSQYWTKWLLRLEEYTEKKKNQNIQKPEYSE

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FIGURE 17

GGCATTCCCTGGCAGAGGGAACAGCATGCCAAGCGTGAGAAGGCTCAGAGTAAGGAGGTTAAGAGCCCAAGTATTG
GAGCCTACAGTTTTGCCCTTCCATGCAGTGTGACAGTGGGCAAGTTCCTTCCCTCTCTGGGTCTCAGTTCTGT
CCCCTGCAAAATGGTCAGAGCTTACCCCTTGGCTGTGCAGGGTCAACTTTCTGACTGGTGAGAGGGATTCTCATG
CAGGTTAAGCTTCTGCTGCTCCTCCTCACCTGCAAAGCTTTTCTGCCACTTTTGCCTCCTTGAAAACTCTTATC
CATCTCTCAAACTCCAGCTACCACATCCTTGCAGCCTTCCCTCATATACCCCACTACTACTGTAGCCCTGTCC
TTCCCTCCAGCCCCACTCTGGCCCTGGGGCTGGGGAAGTGTCTGTGTCCAGCTGTCTCCCCTGACCTCAGGGTTC
CTTGGGGGCTGGGCTGAGGCCTCAGTACAGAGGGGGCTCTGGAAGTGTGTTGACTGAATAAAGGAATTCAGTG
GAAAAAAAAA

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FIGURE 18

AACATGTAAGACTACTGTTTACAATTTGGACATTTTCCTTTCAAACACATTTTTCATGAATATATTATAGGAAAG
TTAAAACCATCTCTATTCTAAAAGGAAAATCTACCATTTTGCTCAGAGAGAAAAGTTACTGAGTTTGTCTATGTGA
TTTTAAGTAGTATTGATTAGAGTATTAAAGAAATGGGGTACTTCAAGTAACATAACACCTGATATTTAAATCTAA
GTTTTAAAAATGTATTTACCCATTGTTAATGAAAGTGTTTCTAAGATGTAACCCCTGGTTAGCTATTCCGTCTT
CTTGCCTTGATGGGTGACTGGTGGTGAATGTGCTGTTGTCATTCCATTGACAGTTCGGGATTTGTGGTGGTCTC
AGCATATTAGCATAGATGTGAGTTGTAAATTTATAGGATTATGGAAGTGAATTGTGGAAGTCTGCAGGGCAGA
CTCTGGAGGCTAGCTTTTTAGAAAACATAAAGCTCCAGTATAAACTTAATTTCTGTCATTTGCCCATTTTCTTG
AAAGTTAAGTGCCAGAAAAGAAAAGGATCGAGTCTCTCTTTTCTTCTACAATAAAACAGAATATACTTTCTCCA
GGGTGGTGGTGGGTTCCTTTTTCTGTTGAGGTGGATTCTGAGATTGAGGAGGGGCTGGAGAAGACAGAGCATG
AGGGAAAGAGACTGAGAACATACTCAGGCTGCCCTCGCCTCCTTTCCCTTTCGTGCTCCTGTCTCCCATCTAGG
AGGACCAGGGCTACCAGTCCTTGTTGGGGACAAGTTTGAGTAGGATCAAGAGACATGTACTGCGCCAGGGCCGTGG
GTTACAAGTGTAAATCC

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FIGURE 19

MKVFLRCNPWLAIPSSCLDGLTGGECAVVIPLTVRDLWWSQHISIDVSCNFIGLWNCNCGTPAGQTLASFLN

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FIGURE 20

CGCTAAGCGTCCCAGCCGCATCCCTCCCGCAGCGACGGCGGGCCCGGGACCCGCGGGCTGTGAACCATGAACACCC
GCAATAGAGTGGTGAACCTCCGGGCTCGGCGCCTCCCTGCCTCCCGCCCGACCCGGGATCCCCAGGACCCCTTCTG
GGCGGCAAGGGGAGCTGAGCCCCGTGGAAGACCAGAGAGAGGGTTTGGAGGCAGCCCCTAAGGGCCCTTCGCGGG
AGAGCGTCGTGCACGCGGGCCAGAGGCGCACAAAGTGCATACACCTTGATAGCACCAAATATAAACCGGAGAAATG
AGATACAAAGAATTGCGGAGCAGGAGCTGGCCAACCTGGAGAAGTGGAAAGGAGCAGAACAGAGCTAAACCGGTTT
ACCTGGTGGCCAGACGGCTAGGTGGAAGCCAGTCAGAACTGAAGTCAGACAGAAACAACAACCTCCAGCTGATGC
AATCTAAATACAAGCAAAAGCTAAAAAGAGAAGAATCTGTAAGAATCAAGAAGGAAGCTGAAGAAGCTGAACTCC
AAAAATGAAGGCAATTCAGAGAGAGAAGAGCAATAAACTGGAGGAGAAAAAAGACTTCAAGAAAACCTTAGAA
GAGAAGCATTTAGAGAGCATCAGCAATACAAAACCGCTGAGTTCTTGAGCAAACTGAACACAGAATCGCCAGACA
GAAGTGCCTGTCAAAGTGCTGTTTGTGGCCCAATCCTCAACATGGGCCAGAAGCTGGGCTTACAGAGATTCTC
TAAAGGCAGAAGAAAACAGAAAATTGCAAAAGATGAAGGATGAACAACATCAAAAGAGTGAATTACTGGAAGTGA
AACGGCAGCAGCAAGAGCAAGAAAGAGCCAAAATCCACCAGACTGAACACAGGAGGGTAAATAATGCTTTTCTGG
ACCGACTCCAAGGCAAAAGTCAACCAGGTGGCCTCGAGCAATCTGGAGGCTGTTGGAATATGAATAGCGGTAAAC
GCTGGGGTATATGAGAAAATATTGACTCCTATCTGGCCTTCATCAACTGACCTCGAAAAGCCTCATGAGATGCTT
TTTCTTAATGTGATTTTGTTCAGCCTCACTGTTTTTACCTTAATTTCAACTGCCACACACTTGACCGTGCAGTC
AGGAGTGACTGGCTTCTCCTTGTCCTCATTTATGCATGTTTGGAGGAGCTGATTCCTGAACTCATATTTAAACTC
TACTGCCAGGGAAATGCTACATTATTTTTCTAATTGGAAGTATAATTAGAGTGATGTTGGTAGGGTAGAAAAAGA
GGGAGTCACTTGATGCTTTTCAAGTTAATCAGAGCTATGGGTGCTACAGGCTTGTCTTTCTAAGTGACATATTCTT
ATCTAATTCTCAGATCAGGTTTTTGAAAGCTTTGGGGGTCTTTTAGATTTTAATCCCTACTTTCTTTATGGTACA
AATATGTACAAAAGAAAAGGTCTTATATTCTTTTACACAAATTTATAAATAAATTTTGAACCTCCTTCTGTAAAA
AAAAAAA

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FIGURE 21

MNTRNRVVNSGLGASPARPTRDPQDP SGRQGELSPVEDQREGLEAAPKGPSRESVVHAGQRRTSAYTLIAPNIN
RRNEIQRIAEQELANLEKWKEQNRAKPVHLVPRRLGGSQSETEVRQKQQLQLMQSKYKQKLKREESVRIKKEAEE
AELQKMKAIQREKSNKLEKKRLQENLRREAFREHQQYKTAEFLSKLNTESPDRSACQSACVCGPQSSTWARSWAY
RDSLKAEENRKLQKMKDEQHOKSELLELKRQQEQERAKIHQTEHRRVNNAFLDRLQGKSQPGGLEQSGGCWNMN
SGNSWGI

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FIGURE 22

TTTTTTCTAGAAAAACACAGCTTCTGTAATCTTTTCTCTTCTCTTTCCTGGAAATTAGAACAAATTTTTTGA
AGGAAGAAATATTGTCAACATTATAACCTTGAGTGAAGCATTATTACTTTAGTAAATATCTCGCTAAGATACTGA
ACATCAAAATTAAAAATCAAACAACCTTCTAAATGTATTTATTGCATTTTTATGCTGTGTACTTTTGAATATAGT
GATTTTATTATTTTATGTAATAATTCATGAAGTGTGTGTACTTTGGTTTCACACACTCAACACCATACCAATAA
TGAAATTATTAGTAATTTCAAGTTACTAATTGATTGGCTGTCATGTGCTATAAATGATAATGCCATCTGTGAACC
AGCAAGGCATAGACAGAATTGTTTGGAAAAAGCCTGATTAGTACCAGTTGCATTAATTCTAACTCCCCTAATTT
AGGACCTTTTTTTTCTTA

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FIGURE 23

ATTTGGAAGATTTTGTATGGTGTCACTGTCATTTTGACATACCCTATGGAATGCTTTGTGACAAGAGAGGTAAT
TGCCAATGTGTTTTTGGTGGGAATCTTTCATCGGTTTTCCACATTGTTGTAAACAGTGATGGTCATCACTGTAGC
CACGCTTGTGTCATTGCTGATTGATTGCCTCGGGATAGTTCTAGAACTCAATGGTGTGCTCTGTGCAACTCCCCCT
CATTTTTATCATTCCATCAGCCTGTTATCTGAAAC TGTCTGAAGAACCAAGGACACACTCCGATAAGATTATGTC
TTGTGTCATGCTTCCCATGGTGTGCTGTTGGTGGTATGGTTTTTGGATTTCGTCATGGCTATTACAAATACTCAAGACTG
CACCCATGGGCAGGAAATGTTCTACTGCTTTCCTGACAATTTCTCTCTCACAATACTCAGAGTCTCATGTTCA
GCAGACAACACAACCTTTCTACTTTAAATATTAGTATCTTTCAATGAGTTGACTGCTTTAAAAATATGTATGTTTT
CATAGACTTTAAACACATAACATTTACGCTTGCTTTAGTCTGTATTTATGTTATATAAAATTATTATTTTGGCT
TTTATCAAGACTTGGCTTTTATGAGTAGTGCAATA TAAAAGATAAAGAAAAGAAAAATTGATGTTTTACCTTTA
ACTG

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FIGURE 24

FGRFCYGVTVILTYPMECFVTREVIANVFFGGNLS SVFHI VVTVMVITVATLVSLLDCLGIVLELNGVLCATPL
IFIIPSACYLKLSEEPRT HSDKIMSCVMLPIGAVVMVFGFVMAITNTQDCTHGQEMFYCFPDNFSLTNTSESHVQ
QTTQLSTLNISIFQ

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FIGURE 25

GACCAGGCCCTCCTGATTGTCCTTTTGTGGGCTATTCTATACTCTCTCTCATAAGTCCCACAAAAGTCTGAGGTAGAG
CACACGTTTCTATACACTGGCTTTTTATTCCCTAATTGAAAAGTAGTTTACTTTTTTAAGAAAGTGGTTTTTACTT
TATTCTTATCATCCTTTTCCAAGAGCTTTTACAGGCATAACTAATTTGACATCAGCAGAACTGATTCATCATCA
GGCCTAGGTTACTCACTACTGCTTCTCTTTGAAGTTGTGAGGCTGGGAGATGCACAACACCGACGAGGGAGATGT
GGTCACAGAGGCATGACAAAGTTCAAGCTTCAGAAAGTAGCCAATCTAATCAATATTCTCACGCTCAAGACAAAA
TTGATCAGTGTAACAGATATAGTAAGTTTCGTCCAGGTCACAGGAGTCAGTTTCACTCTCACATCTTGTCATTTT
AACGACGTGGGCTCCTCACTAAACAATGTTTGGCTTGAAGTAGATTCTATAGAGTTTTATTATGGACAATGTCC
AGTGTCATTGCCAATACTCTCCAAAATGATTTGAGCCATGAAGTACAGGGAGGAGAAGAGTATTTGTTGAACACT
TGTAATGAGTGCTTTTCTTCCATAATAGCACACATCTAGGTATTTTGCCCAATTTGCAGATGAGGCAAAAATTT
GGAGTATGAATTTCAAAGAAGTCGAACAGGCTAGATGAGTGCAGAGATGGAGAGTTAATCAAAGGGAGTCTGCTG
TAAACTCCTCCCACATGTGCAAATTGGCCAATATGAAAGCAATGAATATTTGACAAATTGAAGTTTTCTGCTAC
TTCACCAATTTTCTCAAGGGCTTTGATTGAGTTTCTATATCAGAAGGTAAAAGGCGAGAGGCTTCCATGGCTGC
CTGTCAACAGGGTTTGTGGAGAGAAGGGGCTGGGAACCCCTGGGCAAGCAGCACTTTCAGCAATAAACAGTATCCT
CAGGGGCCCCACAGAGGGAAGATGGTTTTCAGTGCCAAAGGCTTGAGTCCCCTTAATTTTTTTCATTCCACTTCACTC
ATCACCTGTCTCCTTTCTATGCTAGCAAAAGAACAAATTATTCATAGATGGTAAAATTATTTATAGAGCCGGTGTA
ATTAAGAAAGAAAAAGAAAAAGAAACACCTGATGCAAATTTCTTCCATTGCAAGGTGAGAAGATGAAAATCCA
AGTAGCTAAGTGGCTTTCTCAAGCTCACAAATCTATAATTCAGTCTCTTACATCTATCAGAAACATGTTCCGCCT
TATCCTGGTCTCTGAAAACAAAACATAGTGTCTCCAAAGCATTAAATGGTTTTTGTATGTTTGATATAAAAAAGGA
CATGTCCCCAGAAATTATTTCCCTGCATAAACTTTAGAAAATGATGCTTGAAGGTCACTAGAAGTTGATTACTT
AATGACAGCCAGTAAGGTACAAACATACACAGAGCCAAATTTCTGGGAGATGAAAAATGGAAAAAAAATACAGA
TTCAACCAGTGCTTCTTGTC AACACACTACTCTGAGATTTTCTTATTTTAATCTTATGGTCTAGAGTAGTATTA
G

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FIGURE 26

AAGGGGTTCCAGTACTTCTCTACCCCTGGAAGAAGCAGAGAAGCACCTGAGGCAGGAGCCAGGGACCCAGCCCTAC
AACATCAGAGAAGACTCCATTCTGGACCAAAAGGTTGCCCTGCTCAAGGCATAATGGGGCCACCCGTGGGCATCC
ACAGTTTGCAGGGTGTTCCGGAAGGTTCTTGTCAC TGTGATTGGATGCTGGATGCCGCCTGATAGACATGCTGGC
CTGGCTGAGAAACCCCTGAGCAGGTAACCCAGGGAAGAGAAGGAAGCCAGGCCTGGAGGTCCACGGCAGTGGGAG
TGGGGCTCACTGGCTTCCTGTGGGATGACTGGAAAATGACCTCGCTGCTGTTCCCTGGCATGACCCTCTTTGGAA
GAGTGGTTTGGAGAGAGCCTTCTAGAATGACAGAC TGTGAGAGGAAGCAGGGGCAGGGGTTTCCAGCCCGGGCTG
TGCAGGCATCCTGGGGCTGGCAGCACCTTCCCGGCTCACCAGTGCCACCTGCGGGGAGGGACGGGGCAGGCAG
GAGTCTGGGAGGCGGGTCCGCTCCTCTTGCTGCGGCATCTGTGCTCTCCGAGAGAAAACCAAGGTGTGTCAAAT
GACGTCAAGTCTCTATTTAAAAATAATTTTGTGTTTTCTAAATGGAAAAAGTGATAGCTTTGGTGATTTTGTA
AGTCATAAATGCTTATTGTAAAAAATACAGGAAACCACCCCTCACCTGTCCACTTGGGTGATCATTCCAGACCC
CTCCCCAAACATGCATATGTACCTGTCCGTGAGTGTGTGGATGTATGTTTACAGTTCTACATAAATGGGATCATT
TTATACATGGTGCTCTGGAACCCACATTTTTCATGCAGTCATTTGCAGTGAATTATTTATTGTGATAATAAATAG
CATTAGAATACAAAAAAAAAAAAAAAAA

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FIGURE 27

TTTAACTTTGCAACAGGTTTTTATTTTTGCTTTATATCTATTACAGTGTTTGAAACCTAAAGAAATACATTTTC
TCTTCAAATTTGGATGTGTATATAAATAACATTTGTCTGGACTCAGCACACTCAATGCCATGTTTTCTTCGCCTA
TGTCTGCTCTGAAATCAAGCTGTGTCTGTCTACCCAGGGGCCCTGAGAACATGGAAAATAGAGTTTATTGTTATT
AGAAAAATAAAAGCAAATGAATTTGCAAAGAAAAACCAGTGAGAAGGATTAGATTCATCTTCCAAGGGTCCATAG
CTGGTAACCCAAGCCATTCTCGGGGGATATCCAGTCTCTTGAGTGGCTGGGACTCCATTACCCACTTTCCTTCTT
TAATAGGTCAAAGGCAATTCCACAAAAGCTGGCTAAAAAAGCCGACACCCAACCTCCAGAGTCTGAGGGTTCATG
AAGATGTGGACTTTTTTTTTTTGAGACAAGAG